9. CAVEATS AND LIMITATIONS

When conducting evaluations of future conditions and emissions, there are unknown variables that need to be assumed in order to complete the analysis. When dealing with predicted future emissions impacts that affect public health, planners usually err on the conservative side (i.e., assume a greater rate of emissions to better ensure success of mitigation options) and this approach was adopted by the Technical Working Group. As stated previously, this first analysis of NNI should be considered a starting point for further analysis by the entities responsible for its implementation. There are significant technical and financial assumptions that were made in order to complete the analysis within the time constraints set by the Task Force and the Mayor. Future analysis of this initial NNI approach should focus on some of the significant technical and financial assumptions that were used.

Some of the significant technical assumptions include:

- Cargo growth projections,
- Relationship between cargo growth and emissions growth,
- Ship size distributions will remain at 2001 fleet mixes (i.e., assumed that ships do not get larger),
- Relationship between ship calls and cargo growth,
- Cargo and emissions growth rates for container ships used for extrapolating emissions for other ship types (cruise, tankers, bulk, auto carriers, general cargo, etc.),
- All emissions within study area are treated as having same level of impact regardless of proximity to communities,
- Future operational conditions for all sources, terminals, highways, rail lines, etc.,
- No existing or future infrastructure constraints considered in cargo growth or emissions projections,
- Timely development of new engine technologies and emissions reduction technologies,
- Reliance on future regulations that haven’t been adopted at this time, and
- Implementation issues were not incorporated into the technical analysis.

Similarly, there were significant financial assumptions made in order to complete the analysis within the time constraints set by the Task Force. Some of these critical financial assumptions include:

- All cost projections are in unadjusted 2005 dollars,
- Consumption rates of fuels and fuel prices,
- Capital costs for technologies and engines that haven’t been designed yet, and
- Cost effectiveness does not take into account control measure sequencing.
Stakeholder Comments Received:

**Pacific Energy Partners**

This is a very important part of the document and will be referred to frequently during future updates. Given that, I think the discussion of some of the assumptions is a little sketchy. For example, "cargo growth projections" doesn't say much while "all emissions within the study area are treated as having same level of impact regardless of proximity to communities" provides enough information to understand the impact of the assumption. I'd spend a little more time explaining the assumption and the impact it might have on predicting future emissions levels. Same comment with financial assumptions. I think this information will be very important when future changes are made to the plan in terms of explaining to industry and the regulated community why earlier projections may not have been accurate.

**Pacific Merchant Shipping Association**

10. Caveats and Limitations - This section should be moved up in the document and included in the Executive Summary. In addition, we have submitted many comments that should be included in this section.